EXHIBIT 1

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

In re Flint Water Cases 16-10444

_____/   *The Hon. Judith E. Levy*

Bellwether III Case No. 17-10164

DECLARATION OF DR. AARON SPECHT

Pursuant to 28 U.S.C. § 1746, I, Dr. Aaron Specht, hereby declare as follows:

1.   I am an Assistant Professor at Purdue University and Visiting Scientist at Harvard University.

2.   I attained a Ph.D. in medical physics and am the leading expert on the use of portable x-ray fluorescence technology ("pXRF") to assess metal exposures.

3.   I have published widely on the use of pXRF to measure bone-lead content in adults, children, and animals.

4.   I was retained by Plaintiffs' counsel in the above captioned matter and submit this Declaration as part and in support of PLAINTIFFS' MOTION FOR RECONSIDERATION OF THE COURT'S RULING REGARDING VEOLIA DEFENDANTS' REQUEST FOR DR. AARON SPECHT'S PROPRIETARY MATLAB CODE.

5.   I have reviewed Dr. William Huber's ("Dr. Huber") declaration and have identified various mischaracterizations regarding the MATLAB code and

uncertainty values, which appear to have informed the Court's ruling that I must turn over the MATLAB code associated with the pXRF.

6.   While it is unnecessary for me to address each and every inaccuracy contained in Dr. Huber's declaration at this time, I will address those that I understand to be relevant to this specific dispute.
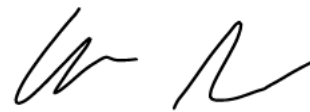
7.   Dr. Huber opines that: "Dr. Specht significantly underestimates the uncertainty values associated with his bone lead measurements and that the true uncertainty is likely greater than his reported bone lead levels for the Bellwether III Plaintiffs." Dr. Huber further asserts that he has been unable to replicate my calculations of bone lead levels and uncertainty values based on the information in my publications, stating that: the "publications include only vague, generic references to his use of MATLAB without providing details of how he performed his calculations" and "with respect to uncertainty values in particular, Dr. Specht's publications simply cite a statistics textbook with no further explanation."

8.   Dr. Huber does not need the MATLAB code in order to verify (or rather disprove) his theory that my uncertainty values are underestimated. Nor does he need the MATLAB code to ascertain whether my values are correct. My results and associated uncertainty values **_can_** be reproduced by replicating the detailed methods from our many manuscripts on the topic. Although there is a possibility that the resulting uncertainly values may not be the exact same number, they will reproduce

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to a reasonable degree of significant figures, i.e., a replicated result which is more than sufficient to prove whether the values are correct, let alone "significantly underestimate[d]." This is consistent with what I explained in my 2020 deposition on pages 175:23-176:9—which Dr. Huber erroneously characterizes as an admission that my "calculations cannot be replicated without [the] MATLAB code[.]"

9.   Additionally, while I wrote the proprietary MATLAB code, it was based on the equations derived and set forth in the available publications. The equations themselves define how we measure bone lead and calculate the uncertainty values from the pXRF. The manuscripts Nie et al 2011; Zhang et al 2021; Specht et al 2014; or Specht et al 2019 all have sufficient detailed methodology to replicate these analyses. Each manuscript utilizing the pXRF for measurement of bone lead has a subsequent equation for how to calculate uncertainty from a resulting measurement.

Respectfully submitted, this the 22 day of March, 2023.

Aaron Specht, PhD